
Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)

217-9197 (toll free).

Reviewer: Durreshwar Anjum

Timestamp: [year=2009; month=4; day=27; hr=13; min=29; sec=4; ms=718;]

Validated By CRFValidator v 1.0.3

Application No: 10567074 Version No: 2.0

Input Set:

Output Set:

Started: 2009-04-14 17:39:59.103

Finished: 2009-04-14 17:40:03.182

Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 79 ms

Total Warnings: 29

Total Errors: 1

No. of SeqIDs Defined: 60

Actual SeqID Count: 60

Error code		Error Descrip	tion								
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(3)	
Ε	201	Mandatory	field dat	ta miss	sinç	g in <22	23>	in	SEÇ) ID	(3)
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(4)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(5)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(16)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(18)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(29)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(30)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(31)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(32)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(33)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(34)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(35)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(38)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(41)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(42)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(44)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(47)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(49)	
W	402	Undefined	organism	found	in	<213>	in	SEQ	ID	(50)	

Input Set:

Output Set:

Started: 2009-04-14 17:39:59.103 **Finished:** 2009-04-14 17:40:03.182

Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 79 ms

Total Warnings: 29
Total Errors: 1
No. of SeqIDs Defined: 60

Actual SeqID Count: 60

Error code		Error Description
W	402	Undefined organism found in <213> in SEQ ID (51) This error has occured more than 20 times, will not be displayed
W	213	Artificial or Unknown found in <213> in SEQ ID (53)
W	213	Artificial or Unknown found in <213> in SEQ ID (54)
W	213	Artificial or Unknown found in <213> in SEQ ID (55)
W	213	Artificial or Unknown found in <213> in SEQ ID (56)
W	213	Artificial or Unknown found in <213> in SEQ ID (57)
W	213	Artificial or Unknown found in <213> in SEQ ID (58)
W	213	Artificial or Unknown found in <213> in SEQ ID (59)
W	213	Artificial or Unknown found in <213> in SEQ ID (60)

<110> Scherer, Stephen W. Minassian, Berge A. <120> Lafora's Disease Gene <130> 4012.1000-003 <140> 10567074 <141> 2009-04-14 <150> PCT/CA2004/001449 <151> 2004-07-30 <150> US 60/491,968 <151> 2003-08-04 <160> 60 <170> PatentIn version 3.1 <210> 1 <211> 2120 <212> DNA <213> Homo sapiens <400> 1 atggcggccg aagcctcgga gagcgggcca gcgctgcatg agctcatgcg cgaggcggag 60 120 atcagectge tegagtgeaa ggtgtgettt gagaagtttg gecaeeggea geageggege

ccgcgcaacc tgtcctgcgg ccacgtggtc tgcctggcct gcgtggccgc cctggcgcac

180

ccgcgcactc	tggccctcga	gtgcccattc	tgcaggcgag	cttgccgggg	ctgcgacacc	240	
agcgactgcc	tgccggtgct	gcacctcata	gageteetgg	gctcagcgct	tegecagtee	300	
ccggccgccc	ategegeege	ccccagcgcc	cccggagccc	tcacctgcca	ccacaccttc	360	
ggcggctggg	ggaccctggt	caaccccacc	ggactggcgc	tttgtcccaa	gacggggcgt	420	
gtcgtggtgg	tgcacgacgg	caggaggcgt	gtcaagattt	ttgactcagg	gggaggatgc	480	
gcgcatcagt	ttggagagaa	gggggacgct	gcccaagaca	ttaggtaccc	tgtggatgtc	540	
accatcacca	acgactgcca	tgtggttgtc	actgacgccg	gcgatcgctc	catcaaagtg	600	
tttgattttt	ttggccagat	caagcttgtc	attggaggcc	aattctcctt	accttggggt	660	
gtggagacca	cccctcagaa	tgggattgtg	gtaactgatg	cggaggcagg	gtccctgcac	720	
ctcctggacg	tcgacttcgc	ggaaggggtc	cttcggagaa	ctgaaaggtt	gcaagctcat	780	
ctgtgcaatc	cccgaggggt	ggcagtgtct	tggctcaccg	gggccattgc	ggtcctggag	840	
caccccctgg	ccctggggac	tggggtttgc	agcaccaggg	tgaaagtgtt	tagctcaagt	900	
atgcagcttg	tcggccaagt	ggataccttt	gggctgagcc	tctactttcc	ctccaaaata	960	
actgcctccg	ctgtgacctt	tgatcaccag	ggaaatgtga	ttgttgcaga	tacatctggt	1020	
ccagctatcc	tttgcttagg	aaaacctgag	gagtttccag	taccgaagcc	catggtcact	1080	
catggtcttt	cgcatcctgt	ggctcttacc	ttcaccaagg	agaattctct	tcttgtgctg	1140	
gacacagcat	ctcattctat	aaaagtctat	aaagttgact	gggggtgatg	ggctggggtg	1200	
ggtccctgga	atcagaagca	ctagtgctgc	cattaatgaa	ttgtttaacc	ctggataagt	1260	
cacttaaact	catctatcca	ggcagggata	attaaaacca	tctggcagac	ttacaaagct	1320	
tgggacagtt	attggagatt	aatctaccat	ttattgaatg	catactctgt	gcaaggaaat	1380	
ttgcaaatat	tagcttattt	aatctgtact	atccagtgag	gtaatttctt	ccccccaag	1440	
atagagtcaa	gctctgtcac	ccaggctgga	gtgcagaagc	atgatcacag	ctcactacag	1500	
tttcaacgtc	ccccgctcag	gtggtccttc	cacctcagcc	tcccaagtag	ctgggaccac	1560	
aagtgtgcat	taccacactc	agctaatttt	tgtattttgg	cagagatggg	gtttcaccat	1620	
gttgcccagg	ctggtctcaa	actcctgagt	tcaagcaatc	caccttcctc	ggcctcccaa	1680	
agtactagga	gtacaggcat	agccacttgc	tcagccataa	tttttattat	taatctcatt	1740	
gtacaagtga	gaaaactgag	acccagagag	cttaagtgac	ttcctcgagg	tcatagttac	1800	
ttactgcctt	agtcccaatt	tgaattcaat	tctgattcca	aataagttgc	gcttaaataa	1860	

gacaacagat gtgggaaaaa tatgtgaatg tgtagtgttg ctatgtgtac tgtctttaca	1920
agtagctaat tattttagca caaagatgtg caaagaaagg agactttatg gagagttcag	1980
gagaaaaagg attttgtggt ggccatcact ttcattcaat ttgcgactgc tctgatggca	2040
cattagatga agttactgtt gatcctgagt tacgtgaata agaaaaacaa ttgaactgct	2100
tattaaaaaa gtaaacatgt	2120
<210> 2	
<211> 395	
<212> PRT	
<213> Homo sapiens	
12132 Homo Sapiens	
<400> 2	
Met Ala Ala Glu Ala Ser Glu Ser Gly Pro Ala Leu His Glu Leu Met 1 10 15	
Arg Glu Ala Glu Ile Ser Leu Leu Glu Cys Lys Val Cys Phe Glu Lys 20 25 30	
Phe Gly His Arg Gln Gln Arg Arg Pro Arg Asn Leu Ser Cys Gly His 35 40 45	
Val Val Cys Leu Ala Cys Val Ala Ala Leu Ala His Pro Arg Thr Leu 50 55 60	
Ala Leu Glu Cys Pro Phe Cys Arg Arg Ala Cys Arg Gly Cys Asp Thr 65 70 75 80	
Ser Asp Cys Leu Pro Val Leu His Leu Ile Glu Leu Leu Gly Ser Ala 85 90 95	
Leu Arg Gln Ser Pro Ala Ala His Arg Ala Ala Pro Ser Ala Pro Gly 100 105 110	
100	
Ala Leu Thr Cys His His Thr Phe Gly Gly Trp Gly Thr Leu Val Asn 115 120 125	

Pro Thr Gly Leu Ala Leu Cys Pro Lys Thr Gly Arg Val Val Val

His Asp Gly	Arg Arg	Arg Val 150	Lys Il	e Phe As	-	Gly Gly	Cys 160
Ala His Gln	Phe Gly 165	Glu Lys	Gly As	p Ala Al 170	a Gln Asp.	o Ile Arg 175	Tyr
Pro Val Asp	Val Thr 180	Ile Thr	Asn As	_	s Val Val.	Val Thr	Asp
Ala Gly Asp	=	Ile Lys	Val Ph	e Asp Ph	ne Phe Gly 205		Lys
Leu Val Ile 210	Gly Gly	Gln Phe 215	Ser Le	u Pro Tr	p Gly Val	. Glu Thr	Thr
Pro Gln Asn 225	Gly Ile	Val Val 230	Thr As	p Ala Gl 23	=	Ser Leu	His 240
Leu Leu Asp	Val Asp 245	Phe Ala	Glu Gl	y Val Le 250	eu Arg Arg	Thr Glu 255	Arg
Leu Gln Ala	His Leu 260	Cys Asn	Pro Are		al Ala Val	Ser Trp	Leu
Thr Gly Ala 275		Val Leu	Glu Hi 280	s Pro Le	eu Ala Leu 285	_	Gly
Val Cys Ser 290	Thr Arg	Val Lys 295	Val Ph	e Ser Se	er Ser Met 300	. Gln Leu	Val
Gly Gln Val	Asp Thr	Phe Gly 310	Leu Se	r Leu Ty 31		Ser Lys	Ile 320
Thr Ala Ser	Ala Val 325	Thr Phe	Asp Hi	s Gln Gl 330	y Asn Val	. Ile Val 335	
Asp Thr Ser	Gly Pro 340	Ala Ile	Leu Cy 34		y Lys Pro	Glu Glu 350	Phe
Pro Val Pro	=	Met Val	Thr Hi 360	s Gly Le	eu Ser His 365		Ala

Leu Thr Phe Thr Lys Glu Asn Ser Leu Leu Val Leu Asp Thr Ala Ser 370 375 380

His Ser Ile Lys Val Tyr Lys Val Asp Trp Gly 385 390 395

<210> 3

<211> 3008

<212> DNA

<213> Canis sp.

<220>

<221> CDS

<222> (698)..(1897)

<223>

<220>

<221> misc_feature

<222> (2692)..(2692)

<223> N=any nucleic acid

<220>

<221> misc_feature

<222> (2748)..(2748)

<223> N=any nucleic acid

<220>

<221> misc_feature

<222> (2750)..(2750)

<223> N=any nucleic acid

```
<220>
<221> misc_feature
<222> (2793)..(2793)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2845)..(2845)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2916)..(2916)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2918)..(2918)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2931)..(2931)
<223> N=any nucleic acid
<220>
<221> misc_feature
```

<222> (2941)..(2941)

<220>

<221> misc_feature

<222> (2990)..(2990)

<223> N=any nucleic acid

<400>	3														
ccccaa	aggcc	cccc	eggee	c cc	caggo	caaco	C CC	aggc	cccc	aggo	caaco	cca (aggc	ccccg	60
gcccca	aagcc	cccca	ıggtt	C CC	egged	cccaa	a gaa	accaa	agcc	CCC	egge	CCC	ccgc	ccccag	120
caccca	agcac	caago	cccc	g co	cccc	egeed	c caa	agca	ccca	gcc	ccago	cac	ccago	ccccg	180
ccccaç	gacac	agccc	cago	a co	ccago	cccc	c gcd	ccca	gcac	ccaç	gaaa	cag	cacco	cagccc	240
ccgcc	ccagc	cccaç	lcccc	c gt	ccc	cccc	c cca	agca	ccca	gcc	ccago	ccc	cagca	agcagc	300
acccaç	gcagg	ggact	gcaa	a go	cgtaç	ggcta	a cco	ccag	gtgg	aaca	accgt	gt	tcta	gttttg	360
ctttg	ccgtt	tgcag	gcctg	g go	cgato	cgggc	d dco	cacco	gctc	gago	cctgt	tt	cccgt	cgcgg	420
aaagco	ggagc	cgccc	ecgcc	c cg	geced	cccgc	c ctç	gaat	gaag	gtca	acgg	gcc	tggg	cctgcg	480
gcgcg	cggtg	cggcc	cgcg	a go	egted	cgctc	a aad	gege	cctc	cgca	agtca	agc ·	gccc	gcccgc	540
ccgcc	aaaaa	accgo	caggo	c gc	cggc	cgaga	a ggd	ctgc	gege	tgc	gaaa	gcg .	acgt	caggcc	600
ccgcc	ccgcc	ccgcc	ccgc	c cc	cgtga	accgo	g cco	ccgg	ccc	ggc	cccg	gcc	ccgg	cccgg	660
accgaç	gegge	gadaç	icāāā	a go	caac	ggcgc	d ccó	gege						g gcg a Ala	715
ggg ag	dc ddd	cdd	gcg	ctg	cqq	gag	ctg	gtg	cgc	gag	gcc	gag	gtc	agc	763
Gly Se															
ttg ct	tc gag	tgc	aaq	gtg	tgc	ttc	gag	agg	ttc	ggc	cac	cqc	caq	caq	811
Leu Le	eu Glu					Phe					His				
	25					30					35				
cgg cg	gc ccg	cgc	aac	ctg	ccc	tgc	ggc	cac	gtg	gtg	tgc	ctg	gcc	tgc	859
Arg Aı	rg Pro	Arg	Asn	Leu	Pro	Cys	Gly	His	Val	Val	Cys	Leu	Ala	Cys	
4 (0				45					50					
gtg go	cg gcc	ctg	gcg	cac	ccg	cgg	acg	ctg	gcc	ctg	gag	tgc	CCC	ttc	907
Val Al	la Ala	Leu	Ala	His	Pro	Arg	Thr	Leu	Ala	Leu	Glu	Cys	Pro	Phe	
55				60					65					70	

_	_		_	_	cgc Arg		_	-		_	_	_	_	_		955
			_		ctc Leu	_		_		_	_		-		_	1003
_		_	_	_	ccc Pro	_	-	-		_	-	_		-		1051
_	_				ttc Phe						_	_			_	1099
	_		_	_	ccc Pro 140	_				-					_	1147
					aag Lys											1195
_				_	ggg Gly		-	-	_	-					_	1243
-	_	-	-		aac Asn	_	-			_	_		-	-		1291
_	_				gtg Val		-				_		_		_	1339
		-	_		tcc Ser 220										_	1387
		-		_	act Thr	-	-		-		_	_		_	_	1435
_	-	_		_	gaa Glu		_		_			_	_	_		1483
		_	_		ccg Pro	_			_							1531
_			_	_	gag Glu			_		_		_				1579

agc acc gcc gtg aag gtg ttc agc cca act atg cag ctg atc ggc cag Ser Thr Ala Val Lys Val Phe Ser Pro Thr Met Gln Leu Ile Gly Gln 295 300 305 310	1627
gtg gat acc ttt ggg ctc agc ctc ttt ttc ccc tct aga ata acc gcc Val Asp Thr Phe Gly Leu Ser Leu Phe Phe Pro Ser Arg Ile Thr Ala 315 320 325	1675
tee gee gtg ace ttt gat cae cag ggg aat gtg att gtt gea gat act Ser Ala Val Thr Phe Asp His Gln Gly Asn Val Ile Val Ala Asp Thr 330 335 340	1723
tct agt cag gcc gtc cta tgc ttg gga cag cct gag gaa ttt cca gtc Ser Ser Gln Ala Val Leu Cys Leu Gly Gln Pro Glu Glu Phe Pro Val 345 350 355	1771
ctg aag ccc atc atc acc cat ggt ctt tcc cat cct gtg gca ctg acc Leu Lys Pro Ile Ile Thr His Gly Leu Ser His Pro Val Ala Leu Thr 360 365 370	1819
ttc acc aag gag aat tct ctt ctt gtg ctg gac agt gca gcc cat tcc Phe Thr Lys Glu Asn Ser Leu Leu Val Leu Asp Ser Ala Ala His Ser 375 380 385 390	1867
gta aaa gtc tac aag gct gac tgg ggg taa tgggggtgtgg tgggggtcct Val Lys Val Tyr Lys Ala Asp Trp Gly 395	1917
ggaactgcca ctaatccagt ttaaccctgg atgaattaat cccatctctc gaacggggat	1977
cattataact gcctgacaga cttataaagg ttgaaggtaa ttattaaaga ataataatga	2037
agtctaccgt ttattgagtt atgtgctccc tgtgctagga aactttgcaa atattagctc	2097
agegtgteet taeagtggta eccagggagg taatgeeeat cattaateee attttagaga	2157
tgagaaaact gagacccgag ggtttaagtg attctctgaa ggtcatgttt acttactgtg	2217
acagtcacaa tgggaactct attctgactc cccaatccct tgctcctaag taggataaca	2277
gatgtgagaa aacgacagca tgtgtctata tgttgttact gtgtgtactc tctttacagg	2337
tagctatttc tcttggttgg acgtgcagag aaaggagact ttctagagag ttcaagagga	2397
aaaagggtag tgtgatgagc atggacgtga gtgtcattga acttgctggt tctttgatgt	2457
cacagtaggt agaatgactg tggatccttc aactgccctt gggaaaggta aacatgtctg	2517
ttgggacctg gatgtcctcc atcataggaa cccaggaaat actagttggt tgctgcagaa	2577
aggettgtgt ggacataagt teaaaactae tgeegaceae egtacattea eacaceteea	2637
gtgggagatg gctggaagac agtcctgtga caggtctgca ttcatagaac aagangccgc	
	2697
caccgttggt tcacggcaga atgagtttgc ctgcctcttc ataatctgtg ncnacccgaa	2697 2757

tttccc	ctaa ccageteeet te	atgctnag	ctagcattta	ggccactggt	aaacccctgt	2877
atactt	cttg agttgaagtt aa	gctttgac	ccagataang	nctgctttaa	tacntgcagt	2937
cgantg	gacc gaataagggg ga	aatttcag	gtgaggtggc	cgggttcttt	atnaaccggt	2997
tttggt	ttgt a					3008
<210>	4					
<211>	399					
<212>	PRT					
<213>	Canis sp.					
<220>						
<221>	misc_feature					
<222>	(2692)(2692)					
<223>	N=any nucleic aci	.d				
<220>						
<221>	misc_feature					
<222>	(2748)(2748)					
<223>	N=any nucleic aci	d				
<220>						
<221>	misc_feature					
<222>	(2750)(2750)					
<223>	N=any nucleic aci	.d				
<220>						
<221>	misc_feature					
<222>	(2793)(2793)					
<223>	N=any nucleic aci	d				
<220>						

<221> misc_feature

```
<222> (2845)..(2845)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2916)..(2916)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2918)..(2918)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2931)..(2931)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2941)..(2941)
<223> N=any nucleic acid
<220>
<221> misc_feature
<222> (2990)..(2990)
<223> N=any nucleic acid
<400> 4
Met Gly Ala Glu Ala Gly Ser Gly Arg Ala Leu Arg Glu Leu Val
                                  10
Arg Glu Ala Glu Val Ser Leu Leu Glu Cys Lys Val Cys Phe Glu Arg
           20
                               25
                                                   30
```

Phe Gly His Arg Gln Gln Arg Arg Pro Arg Asn Leu Pro Cys Gly His
35 40 45

Val	Val 50	Cys	Leu	Ala	Cys	Val 55	Ala	Ala	Leu	Ala	His 60	Pro	Arg	Thr	Leu
Ala 65	Leu	Glu	Cys	Pro	Phe 70	Cys	Arg	Arg	Ala	Cys 75	Arg	Gly	Cys	Asp	Thr 80
Ser	Asp	Суз	Leu	Pro 85	Val	Leu	His	Leu	Leu 90	Glu	Leu	Leu	Gly	Ser 95	Ala
Leu	Arg	Pro	Ala	Pro	Ala	Ala	Pro	Arg	Ala	Ala	Pro	Arg	Ala	Ala	Pro

Cys Ala Pro Gly Ala Leu Ala Cys His His Ala Phe Gly Gly Trp Gly
115 120 125

100 105 110